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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/646,747

08/25/2003

Makoto Ono

Q76400

1774

23373

7590

05/09/2006

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EXAMINER

SPEER, TIMOTHY M

ART UNIT

PAPER NUMBER

1775

DATE MAILED: 05/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/646,747

Applicant(s)

ONO, MAKOTO

Examiner

Timothy M. Speer

Art Unit

1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>03/10/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 03-10-06 has been considered and made of record. A copy of the 1449 initialed, dated and signed by the Examiner is included herewith.

Claim Rejections - 35 USC §§ 102 and 103

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3 and 5-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Otaki (JP 361095978).
4. As an initial matter, the Examiner notes that the present rejection is based on an oral translation of Otaki. A complete translation is being prepared.
5. Otaki teaches thermal recording materials comprising a thermal recording layer and a protective layer. The protective layer includes a water soluble resin, such as long-chain alkyl ether modified PVA having 8-20 carbon atoms, and at least one type of Group IV inorganic ultrafine particles; the PVA may comprise the monomer units recited in instant claim 7.

Otaki further teaches that the inclusion of zirconium compounds in the protective layer of a thermal recording material improves storability of the material as the Group IV inorganic compound. Moreover, Otaki exemplifies water or oil soluble zirconium compounds.

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Therefore, it is the Examiner's position that the present claims are anticipated by Otaki.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Otaki.

Otaki was discussed above and fails to teach the presently claimed ranges with respect to the Group IV compound. Discovering optimum or workable ranges for the amount of zirconium compound involves no more than routine experimentation by a worker in the art and is not considered to be inventive.

8. Claims 8-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otaki, as applied to claims 1-3 and 5-7 above, and further in view of Jimbo (US 5,998,082).

Otaki were discussed above and fails to teach the inclusion of boric acid in a thermal recording material. Jimbo teaches that boric acid may be used as a stabilizer in thermal recording materials (col. 19, lines 52-55, for instance). Therefore, it would have been obvious to add boric acid to the combination of Makoto in view of Otaki, as discussed above, in order to exploit the art recognized stabilizing affects of boric acid in thermal recording materials.

Moreover, Jimbo is not limiting on the layer in which the boric acid is present and, accordingly, it would have been obvious to include this component in layers any layer of the material, such as recited in new claim 21. Therefore, it is the Examiner's position that the present claims are prima facie obvious in view of the applied prior art.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy M. Speer whose telephone number is 571-272-8385. The examiner can normally be reached on M-Th, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Timothy M. Speer


JENNIFER C. MCNEIL
SUPERVISORY PATENT EXAMINER
5/1/06